

Examination of sex differences in the association of interpersonal violence and symptoms of depression and alcohol use disorder among college students

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Introduction

- Childhood interpersonal violence (IPV) exposure increases the risk for major depression and alcohol use disorder (AUD) (Colman et al. 2013).
- In the United States, women have a higher prevalence of experiencing major depression and IPV than men (Altemus, Sarvaiya, and Neill Epperson 2014; Smith et al. 2017).

Methods

- Data were from the Spit for Science project collected from college students ($N = 7561$, 64% female).
- Participants self-reported IPV exposure (experiencing physical or sexual assault prior to starting college), depression symptoms (4-item abbreviated Symptoms Checklist-90 for previous 30 days), and AUD symptoms (11-item DSM-5 criteria for the last year).

Table 1: Demographics			
	N	IPV Exposure*	AUD Ever**
Sex			
Female	4872 (64%)	2061 (42%)	1523 (31%)
Male	2789 (36%)	873 (32%)	837 (31%)
Race/Ethnicity			
White	3878 (51%)	1567 (40%)	1312 (34%)
Black/African American	1447 (19%)	554 (38%)	382 (26%)
Asian	1211 (16%)	363 (29%)	321 (27%)
Hispanic/Latino	436 (5%)	192 (44%)	161 (37%)
More than One Race	382 (5%)	188 (50%)	130 (34%)
Unknown	93 (1%)	42 (39%)	27 (29%)
Pacific Islander	38 (<1%)	11 (36%)	17 (45%)
Native American	35 (<1%)	17 (37%)	10 (29%)
Total	7561 (100%)	2934 (39%)	2360 (31%)
* prior to starting college ** during college			

Sex did not moderate the association of interpersonal violence with symptoms of depression and alcohol use disorder.

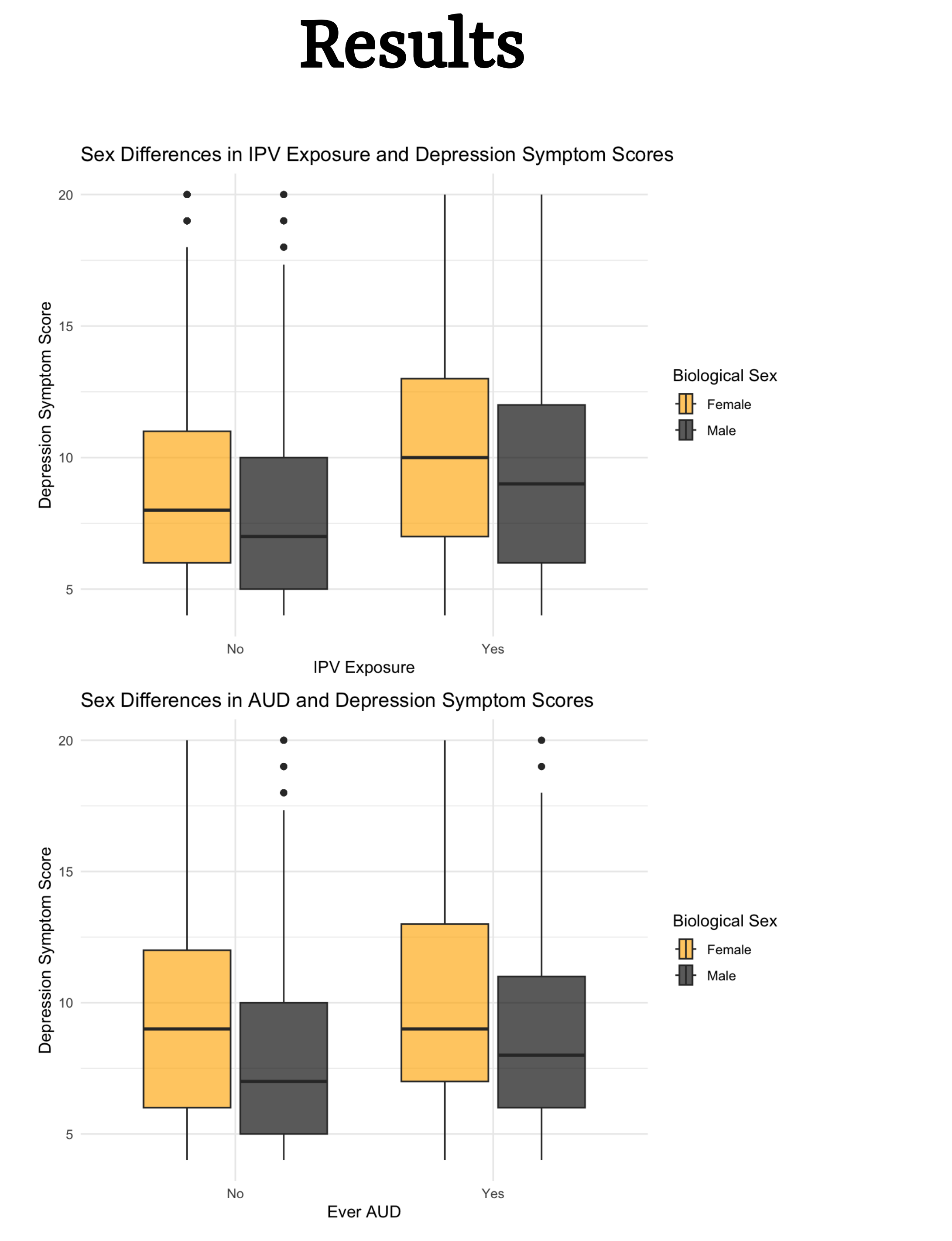


Table 2: Two-Sample <i>t</i> -test and Two-Proportions <i>z</i> -test Results						
	Female		Male		<i>t</i>	<i>p</i>
	M	SD	M	SD		
Depression Symptoms	9.07	3.68	8.03	3.54	11.97	$6.17 \times 10^{-33} *$
	N	%	N	%	<i>X</i> ²	<i>p</i>
IPV Exposure	2061	42%	873	32%	422.63	$2.68 \times 10^{-17} *$
AUD Ever	1523	31%	837	31%	0.01	0.53

* $p < .001$

Table 3: Logistic Regression Results			
Predictor(s)	Coefficient	Standard Error	P-value
Predicts Alcohol Use Disorder			
Sex	0.09	0.05	7.86×10^{-2}
Depression Symptom Score	0.04	0.01	$4.85 \times 10^{-9} *$
IPV Exposure	0.48	0.05	$2.70 \times 10^{-20} *$
Depression Symptom Score and IPV Exposure	-1.33	0.07	$4.51 \times 10^{-91} *$
Sex, Depression Symptom Score, and IPV Exposure	-1.38	0.07	$6.91 \times 10^{-82} *$

* $p < .001$

Conclusions

- There was no difference in the rate of AUD between the sexes (31% vs. 31%, $p = 0.53$), lending evidence to the decreasing gap in negative alcohol phenotypes between the sexes (White et al. 2015).
- Biological sex was not a significant predictor for AUD ($p = 0.08$).

References

Altemus, Margaret, Nilofar Sarvaiya, and C. Neill Epperson. 2014. "Sex Differences in Anxiety and Depression Clinical Perspectives." *Frontiers in Neuroendocrinology*, Sex Differences in Neurological and Psychiatric Disorders, 35 (3): 320–30. <https://doi.org/10.1016/j.ynrne.2014.05.004>.
Colman, Ian, Yasmin Garad, Yiye Zeng, Kiyuri Naicker, Murray Weeks, Scott Patten, Peter Jones, Angus Thompson, and T. Wild. 2013. "Stress and Development of Depression and Heavy Drinking in Adulthood: Moderating Effects of Childhood Trauma." *Social Psychiatry & Psychiatric Epidemiology* 48 (2): 265–74. <https://doi.org/10.1007/s00127-012-0531-8>.
Smith, Sharon, Kathleen Basile, Leah Gilbert, Melissa Merrick, Nimesh Patel, Margie Walling, and Anurag Jain. 2017. "National Intimate Partner and Sexual Violence Survey (NISVS): 2010–2012 State Report." <https://stacks.cdc.gov/view/cdc/46305>.
White, Aaron, I-jen P. Castle, Chiung M. Chen, Mariela Shirley, Deidra Roach, and Ralph Hingson. 2015. "Converging Patterns of Alcohol Use and Related Outcomes Among Females and Males in the United States, 2002 to 2012." *Alcohol: Clinical and Experimental Research* 39 (9): 1712–26. <https://doi.org/10.1111/acer.12815>.

